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Pilot testing a computerized CBT program in a remote Arctic region: Nunavut youth and youth workers reflect on SPARX

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MEDICAL AND
HEALTH SCIENCES



Background

Evidence suggests that computerized CBT (cCBT) may be effective for treating depression (Andrews et al., 2010; Richardson, Stallard, and Velleman, 2010). Youth depression is one of the most significant health concerns in Nunavut (Canada) but access to mental health services remains limited (Kirmayer et al., 2000). Furthermore, suicide rates in Inuit populations have more than tripled in the past 20 years (Chachamovich et al., 2013). There is a need for a culturally relevant intervention that will reach Inuit youth in remote communities who may be at risk.

The current project is a pilot evaluation. Youth in Nunavut have completed the SPARX program, and feedback from youth and youth workers was used to evaluate SPARX with a view to possible future development.

Method

Twelve youth participants completed the SPARX program. Eight community worker participants from Nunavut supervised the youth during the SPARX trial. Participants completed focus group interviews about their experiences of SPARX. Thematic analysis was used to analyze focus group data.

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What is SPARX?

SPARX is a seven-module game-like computer program (Merry et al., 2012; Shepherd et al., 2015). Youth are required to guide their avatar through a series of challenges whilst simultaneously developing CBT skills such as relaxation, positive thinking, and coping thoughts.



Results

Five themes were identified based on youth feedback:

- 1. SPARX promotes emotional regulation.** It teaches ways of thinking more positively, provides strategies to cope with negative emotions and stress, encourages problem-solving techniques, and assists in helping young people to become calm.
- 2. SPARX skills can be applied to daily life.** SPARX skills are useful when feeling upset, angry, or hopeless, in school situations, and in interactions with family and friends.
- 3. SPARX should be recommended to peers.** Most would recommend SPARX to friends and family, describing it as fun and useful. *“I see most of them are stressed... I want them to learn the skills I learned”* (Youth from Kugaaruk).
- 4. SPARX should be modified to be Inuit-specific.** Familiarity would make it more appealing. *“Characters with Inuit clothing; places we went to, to be more Inuit; maybe add animals like polar bears”* (Youth from Qikiqtarjuaq).
- 5. SPARX could be improved (technically enhanced).** Need for more adventure and game complexity. Technical issues needed fixing. SPARX should be played at school.

Four themes were identified based on youth worker feedback:

- 1. Positive changes in the youth who had completed SPARX.** Youth were more conscious of how they reacted in various situations, were more aware of their feelings, seemed empowered, and thought about SPARX skills in daily life.
- 2. Need for access to SPARX for all youth.** SPARX could benefit other youth struggling with low mood and past trauma. SPARX was seen as a fun way to learn emotional coping skills.
- 3. SPARX should be modified to be Inuit-specific.** Adapting SPARX might make youth more engaged and encouraged, SPARX would also be more relatable and familiar. Suggestions consisted of making it resemble a Northern environment; reflect Nunavut fashion; include Inuit names, and include some Inuit languages; and have rewards that were more Inuit-specific.
- 4. Systematic challenges encountered when administering SPARX should be addressed.** Youth workers faced several challenges e.g. recruiting and maintaining youth involvement, time pressures, venue and storage of laptops issues. Teachers should supervise youth, and there is a need for ‘back-up’ workers. Discussions with youth should occur after each module to ensure understanding and eliminate any technical issues.

Conclusion

Currently, there is a push for the provision of culturally-sensitive mental health services, and SPARX could become a useful tool if made available to Canada’s Inuit youth. Nunavut youth and youth workers demonstrated a strong interest in making SPARX Inuit-specific thereby supporting the development of a cultural adaptation of SPARX.